

Title (en)
High density semiconductor memory

Title (de)
Halbleiterspeicher mit hoher Dichte

Title (fr)
Mémoire semi-conductrice à haute densité

Publication
EP 0905785 A3 20030813 (EN)

Application
EP 98307876 A 19980929

Priority
US 93945597 A 19970929

Abstract (en)
[origin: US5864496A] The semiconductor memory includes a memory cell array (10) of memory cells arranged in rows and columns, and a plurality of diagonal bit lines (BLP1-BLPN) arranged in a pattern that changes horizontal direction along the memory cell array to facilitate access to said memory cells. The bit lines are arranged non-orthogonal to a plurality of dual word lines (WL1-WLM), where each dual word line includes a master word line (MWLi) at a first layer and a plurality of local word lines (LWL1-LWLX) at a second layer. The local word lines are connected to the master word line of a common row via a plurality of spaced electrical connections (29), e.g., electrical contacts in a "stitched" architecture, and each local word line is connected to plural memory cells (MC). The electrical connections run in substantially the same pattern along the memory cell array as the bit lines.

IPC 1-7
H01L 27/108; **G11C 11/409**; **G11C 8/00**; **H01L 27/105**; **H01L 21/8242**; **G11C 8/14**

IPC 8 full level
H01L 27/108 (2006.01); **G11C 7/18** (2006.01); **G11C 11/4097** (2006.01); **H01L 21/8242** (2006.01)

CPC (source: EP KR US)
G11C 7/18 (2013.01 - EP KR US); **G11C 8/14** (2013.01 - KR); **G11C 11/4097** (2013.01 - EP KR US); **H10B 12/482** (2023.02 - KR); **H10B 12/488** (2023.02 - EP KR US); **H10B 12/038** (2023.02 - EP US)

Citation (search report)

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- [A] US 4638458 A 19870120 - ITOH YASUO [JP]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 06 30 June 1997 (1997-06-30)
- [A] PATENT ABSTRACTS OF JAPAN vol. 017, no. 065 (E - 1317) 9 February 1993 (1993-02-09)
- [A] PATENT ABSTRACTS OF JAPAN vol. 012, no. 030 (E - 578) 28 January 1988 (1988-01-28)
- [A] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 07 31 July 1997 (1997-07-31)

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Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
US 5864496 A 19990126; CN 1213834 A 19990414; CN 1244932 C 20060308; EP 0905785 A2 19990331; EP 0905785 A3 20030813; JP H11163299 A 19990618; KR 100564662 B1 20060714; KR 19990030225 A 19990426; TW 439063 B 20010607

DOCDB simple family (application)
US 93945597 A 19970929; CN 98124323 A 19980929; EP 98307876 A 19980929; JP 27395598 A 19980928; KR 19980040450 A 19980929; TW 87116172 A 19990119